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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,520	10/07/2005	Vincent Granier	0076144-000005	2571

21839 7590 03/09/2011  
BUCHANAN, INGERSOLL & ROONEY PC  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER
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NILAND, PATRICK DENNIS

ART UNIT	PAPER NUMBER
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1762

NOTIFICATION DATE	DELIVERY MODE
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03/09/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/552,520	<b>Applicant(s)</b> GRANIER ET AL.	
	<b>Examiner</b> Patrick D. Niland	<b>Art Unit</b> 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/26/09 and 12/28/09.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-17, 19, 20 and 23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-17, 19, 20 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/28/09 has been entered.

The amendment of 10/26/09 and 12/28/09 has been entered. Claims 10-17, 19, 20, and 23 are pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-17, 19, 20, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. It is unclear what is intended by the instantly claimed general formula. Particularly, it is unclear what is intended by "p represents a value between 1 and 2" coupled with the removal of the inclusion of the "limits". It is unclear if this language of the claims is intended to require values of from infinitesimally greater than 1 to infinitesimally less than 2 or if the integers 1 and 2 are also intended to be encompassed by this language, particularly in view of the cancelled language regarding the definition of p. This is possible if there is a mixture of compounds in which p has its various possible values and the recited p is the average value for p. However, it is unclear how this is accomplished for "a compound", i.e. a single compound, since the value of p must be an integer for a single compound.

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10-17, 19, 20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 6528573 Probst et al. in combination with the teachings of US Patent Application Publication No. 2001/0021746 A1 Nabavi et al..

Probst et al. discloses aqueous emulsions which may contain phosphorous containing and ethylene oxide containing emulsifier and polyisocyanates falling within the scope of those of the instant claims as adhesives at the abstract; column 1, lines 66-67; column 2, lines 1-67, particularly 1-12 which encompasses the instantly claimed isocyanate composition; column 4, lines 23-40, which encompasses the instantly claimed surfactant (b) and its method of addition; column 5, lines 57-63, which encompasses the instantly claimed pH, and lines 64-67, which when coupled with the particulars of the polyisocyanate of Probst, particularly the viscosity, which is indicative that the polyisocyanates of Probst are of low molecular weight as indicated by the disclosed viscosity and its relation to molecular weight by definition of “viscosity average molecular weight”, indicates that the instantly claimed polydispersity and  $d_{50}$  are expected of the polyisocyanates of Probst since the lower particle sizes of Probst are not expected to be able to vary significantly to achieve the lower average sizes due to constraints on such average particle sizes conferred by the polyisocyanate molecule sizes, i.e. the average molecular weights thereof and the polydispersities typically associated with lower molecular weights tend to be low; column 6, lines 1-12, which encompasses the instantly claimed viscosity and isocyanate

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content based on the relationship of viscosity and molecular weight and the relationship of molecular weight to isocyanate content, lines 13-67; column 7, lines 1-67, particularly 1-3; column 8, lines 1-12 and 19-37, particularly lines 33-37 which is the instantly claimed joining of at least two surfaces with the applied emulsion; and the remainder of the document. Column 6, lines 26-67, e.g. lines 54-55 of Probst falls within the scope of the instant claim 37.

Probst does not disclose the instantly claimed surfactant.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the instantly claimed surfactant as that of Probst because Probst encompasses the instantly claimed surfactants, as discussed above, and the benefits thereof as described in Nabavi would have been expected in the adhesive method of Probst.

Nabavi discloses the instantly claimed compositions at the abstract, which encompasses all free NCO groups, sections [0051]-[0059] which encompasses the instantly claimed surfactant, sections [0108]-[0124] of which [0110] encompasses the instantly claimed viscosities and the identities of the specific isocyanates have the instantly claimed NCO contents, e.g. the exemplified isocyanates have the instantly claimed NCO contents though does not use it for the instantly claimed adhesive method. The reference disclosure at section [0110] regarding lowering viscosity and reducing solvent content by using trimers or dimers discussed therein and the viscosity requirements of this section coupled with the ordinary skilled artisan's understanding of how viscosity is affected by molecular weight by definition of "viscosity average molecular weight" is such that the ordinary skilled artisan would have envisioned the instantly claimed polyisocyanates from the reference's disclosure at section [0110]. It is not seen that the compositions of the reference contain any excess acid nor base and are therefore

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expected to have pHs in the broad range of the instant claims, particularly if they are used as coatings, which cannot degrade the substrates they are applied to. The polyols of section [0011] fall within the scope of the instantly claimed adhesive polyol. The coatings adhere to substrates which meets the requirement of the instant claims such that the benefits of using the instantly claimed surfactants that are described by Nabavi would have been desired in Probst, including the inference of Nabavi, section [0014] that the instantly claimed surfactants do not cause poor adhesion. In other words, Nabavi and Probst are analogous art because they both are concerned with adhering aqueous compositions of polyisocyanates to a substrate. Such adhesion applies to coatings and adhesives as has been experienced by anyone who has allowed a paintbrush to dry while in contact with another surface. The instantly claimed pH is disclosed at section [0157]. The instantly claimed “emulsion” is met at section [0010] and section [0151]. Sections [0072], [0172]-[0173], and [0176]-[0179] are noted as are the emulsions disclosed by the reference containing the instantly claimed isocyanates, emulsifiers, water, pH, and made by the processes of the reference, such as sections [00154]-[0157].

It would have been expected that the composition properties and parameters that result from the surfactant of Nabavi would have been expected in the compositions of Probst.

It is noted that the phosphate surfactant of Probst is used to make the polyols. This means of addition, particularly when discontinuous, as is disclosed, falls within the scope of the instantly claimed method of adding the surfactant. The surfactant is not removed from the polyols and will therefore be in the final product of Probst. The polyols per se may emulsify the isocyanate but the phosphate emulsifier will also emulsify it due to its inherent nature. It is noted that the phosphate emulsifier remains in the aqueous dispersion of polymers a) of column 7, lines

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62-67. The citation of Probst, column 8, lines 33-37 is the instantly claimed adhesive method per se. Nabavi is not cited for this use. It is cited for the specific surfactants generally encompassed by Probst. The examiner addresses the analogousness of Probst and Nabavi above. MPEP 2141 and 2143, particularly the portions relating to the cited "KSR" decision, are noted. More particularly aqueous emulsions of binder will form films even if described as adhesive and adhere substrates even if only described as a coating composition. The applicant is invited to see if that is not true of the emulsions of each of Probst and Nabavi. They must only coat the compositions of Probst onto a substrate and cure/dry them and coat the compositions of Nabavi onto a substrate and attach another substrate thereto and cure/dry the product that results. This has been observed by anyone who has placed a wet paint brush onto a substrate and allowed it to dry. It is expected that a "coating composition" or "paint", which must necessarily adhere to a substrate and which can therefore necessarily adhere to two or more substrates simultaneously, will be adhesive and therefore can act as adhesives as well as coatings, as is evidenced by Probst, e.g. column 8, lines 19-37, noting coating and "adhesive" therein. The examiner therefore maintains that the cited references are analogous art to each other. Most importantly, Probst discloses the genus of the emulsifiers generally that are more specifically disclosed by Nabavi. It is not seen that the compositions of Probst cannot also have the argued properties, particularly since they are also coatings as well as adhesives. One could necessarily adhere two substrates with the compositions of Nabavi using the instantly claimed method, for the reasons stated above. The instant claims recite no limitations sufficient to inherently establish unexpected results over the cited prior art in a manner commensurate in scope with the cited prior art and the instant claims and the applicant does not probatively demonstrate unexpected results over the

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cited prior art in a manner commensurate in scope with the cited prior art and the instant claims. Probst discloses the use of its genus and Nabavi discloses the instantly claimed emulsifier with both Probst and Nabavi disclosing compositions which must adhere to substrates. The instantly claimed emulsifier clearly does not inhibit attachment in Nabavi.

The prior art does not disclose adhering wood or elastomer of the instant claim 23.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the method of adhering substrates of Probst, as discussed above, to adhere wood or elastomeric substrates, because Probst shows their compositions to adhere to wood and elastomeric articles, such as leather, at column 8, lines 19-37, particularly 28 and 33-34, and therefore their compositions would have been expected to adhere wood to the substrates of Probst and leather, i.e. elastomer, and the textiles, which include elastomers, to the substrates of Probst.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Friday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://portal.uspto.gov/external/portal>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Patrick D Niland/  
Primary Examiner  
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